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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BAREFORD, KATHERINE A	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,735	RISING, LARRY	
	Examiner	Art Unit	
	Katherine A. Bareford	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) *1-23 and 49-74* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Claims 24-25 are canceled

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

The compliant amendment in response to the notice of non-compliant amendment of June 13, 2005 has been received and entered. Furthermore, the arguments of the amendment of April 11, 2005 have been considered.

With the amendment, claims 24 and 25 have been canceled, leaving claims 26-48 pending for examination.

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 24-48 in the reply filed on April 11, 2005 is acknowledged.

2. Claims 1-23 and 49-74 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 11, 2005.

Specification

3. The objection to the disclosure because of informalities as to the reference to appendix A at page 10, lines 12-15 is withdrawn due to the removal of that material in the amendment of June 13, 2005.

Claim Objections

4. The objections to claims 24, 25, 27, 28, 31-36, 39-41 and 43-45 provided in the last Office Action are withdrawn due to applicant's amendments to the claims of June 13, 2005 to resolve these issues.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 26-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claim 26 has been amended by the June 13, 2005 amendment to require "passing the substrate with remaining chemical mixture by and against an evaporator apparatus, such that the evaporator apparatus operates as a heat plate to evaporate the non-aqueous solvent into a solvent vapor". However, this is new matter. The figures as provided do not indicate that the evaporator is a heat plate that contacts the substrate. Furthermore, the description in the specification at page 11 of the evaporator apparatus further does not indicate the use of a heat plate that contacts the substrate.

7. The rejection of claims 30-48 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn due to applicant's amendments of June 13, 2005 to overcome the rejections.

Double Patenting

8. The provisional rejection of claims 24 and 25 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-14 of copending Application No. 10/611, 746 is withdrawn due to applicant's amendments of June 13, 2005 to cancel claims 24 and 25.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 26-30 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Wedler (US Re 27,995).

Wedler teaches a method of applying a chemical solution to a textile substrate. Figure 3 and column 1, lines 15-30. A chemical mixture is formed that can comprise a

non-aqueous solvent and a chemical solute. Column 1, lines 15-30, column 3, lines 25-35, and column 4, lines 10-20. The chemical mixture is applied to the substrate forming a wet substrate. Figures 1 and 3 and column 4, lines 10-20 and 65-75. The solvent is removed from the wet substrate leaving a substrate with remaining chemical solute. Figures 1 and 3 and column 4, lines 65-75 (the padding rolls 14). The removal of the solvent from the substrate can comprise removing a portion of the chemical mixture from the wet substrate leaving a substrate with remaining chemical mixture. Figures 1 and 3 and column 4, lines 65-75 (the padding rolls 14). The boiling point of the solvent in the substrate with remaining chemical mixture can be lowered. Figure 3, column 4, lines 65-75 and column 3, lines 1-15 (a vacuum is provided in the chamber 12, 12', which would inherently lower the boiling point). The solvent can be evaporated into solvent vapor by passing the substrate with remaining chemical mixture by and against an evaporator apparatus. Figure 3 and column 5, lines 5-25 (the cylinders 44). The evaporator apparatus can act as a heat plate to evaporate the solvent into solvent vapor. Figure 3 and column 5, lines 5-25 (the cylinders 44 are heated and act to vaporize the solvent and dry the web).

Claim 27: the removal of a portion of chemical mixture can be performed using a squeeze roller. Figures 1 and 3 and column 4, lines 65-75 (padding rolls 14).

Claims 28-29: the evaporator apparatus can be a heat exchanger apparatus that uses steam as the heat exchanger. Figure 3 and column 5, lines 5-25 (the cylinders 44 are heated and act to vaporize the solvent and dry the web, and can be heated with steam).

Claim 30: the solvent vapor can be prevented from escaping by using a negative pressure. Figure 3 and column 4, lines 60-75. The solvent vapor can be removed. Column 4, lines 50-55 and column 5, lines 1-5.

Claim 33: the removed solvent can be collected. Column 4, lines 65-75 and figure 3. The solvent removed in the squeezing is collected back in the coating pool. Figure 3. The solvent removed from evaporation can also be collected for recycling for reuse. Column 4, lines 55-65 and column 5, lines 1-5.

11. The rejection of claim 24 under 35 U.S.C. 102(b) as being anticipated by Vitalis (US 2717877) is withdrawn due to the cancellation of the claim by the amendment of June 13, 2005.

12. The rejection of claims 24-25 under 35 U.S.C. 102(b) as being anticipated by Dawson (US 3617211) is withdrawn due to the cancellation of the claims by the amendment of June 13, 2005.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wedler as applied to claims 26-30 and 33 above, and further in view of Ellison et al (US 4136636).

Wedler teaches all the features of these claims except the blower.

However, Ellison teaches that when moving a coated substrate an oven area it is known to use a fan to establish a slightly negative pressure, causes inward gas flow, and would prevent vapors from escaping. Column 6, lines 1-45 and column 4, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wedler to use a blower fan as shown by Ellison, with an expectation of providing a desirable coated fabric, because Wedler teaches to coat a fabric followed by squeezing to remove excess solvent and then passage into an dryer oven chamber with a negative pressure (vacuum), and Ellison teaches providing fans at an oven entrance is a desirable method to provide a negative pressure. As the negative pressure pulls gases in, it would prevent vapors from exiting.

15. Claims 32 and 34-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wedler as applied to claims 26-30 and 33 above, and further in view of Kinsley, Jr. (US 4421794).

Wedler teaches all the features of these claims, except the solvent removing features and recirculating features. Wedler does teach the padding applicator, as required by claims 39. See column 4, lines 65-75.

However, Kinsley teaches a method for removing non-aqueous solvent from a substrate, which substrate can be paper or a fabric. Column 1, lines 10-15 and column 6, lines 39-45. After a substrate has been coated with a chemical mixture of a coating material and a solvent, the solvent is to be removed. Column 3, lines 55-65. The coated substrate is passed into a chamber which can be at reduced pressure, which would lower a boiling point of the solvent. Column 7, lines 5-15, column 5, lines 45-65, and column 8, lines 35-55. Then the non-aqueous solvent is then evaporated into a solvent vapor. Column 2, line 60 through column 3, line 10. A steam based heat exchanger is used to evaporate the solvent (the steam is a heat exchanger heating the solvent). Column 3, lines 55-65. Vapors are prevented from escaping to the extent that a negative pressure is created. Column 5, lines 45-65. Solvent vapors that have been evaporated into the steam are removed from the system. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40. Removed solvent is collected. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40. The collecting can include pushing the solvent vapor into a scrubber chamber. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40 (the condensing and distillation/decanting). This would occur via the negative pressure, since such pressure is present. Column 5, lines 45-65. The vapor is condensed into a condensed liquid solvent solution. Column 5, line 65

through column 6, line 15 and column 7, lines 20-40. This is collected and then heated to revaporize the solvent, the revaporized solvent is then cooled and condense to recondensed solvent, which is collected. Column 5, line 65 through column 6, line 15 and column 7, lines 20-40 (the condensing and distallation/decanting). A water mechanism is used as a condenser apparatus. Column 7, lines 25-35. Kinsley also teaches that a separator can be present in the process to provide optimal steam which would remove mist, since water is removed. Column 6, lines 45-60. This system provides for an easy and efficient removal of solvent. Column 2, lines 35-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wedler to use a solvent recycling system for recirculating the collected colvent as shown by Kinsley, with an expectation of providing a desirable coated fabric, because Wedler teaches to coat a fabric followed by squeezing to remove excess solvent and heating in a drying oven to remove solvent and that the vapors are to be recycled for reuse, and Kinsley teaches a desirable method of

VB ~~recirculating~~ treating solvent recovered to allow for reuse when coating fabric with a solvent containing material followed by heating in an oven to remove solvent. It would further have been obvious to use a water spray mechanism to condense the solvent vapor as in claim 35 in the process of Wedler in view of Kinsley with an expectation of desirable coating results, because Kinsley teaches to condense by adding cold water, which would be inclusive of adding the cold water by spraying. It would further have been obvious to modify Wedler in view of Kinsley to use a steam heat based exchanger to heat the "re-boiler

tank" in the processes of distillation/decanting as in claim 36 with an expectation of providing desirable heating, because Kinsley teaches distiallation/decanting of the recovered solvent vapors and such a process would require heating in a "tank", and Kinsley and Wedler both further teach heating with steam, such that steam would be present to provide heating. It further would have been obvious to modify Wedler in view of Kinsley to provide pumping of the recovered solvent from a recovery tank (which would be provided to hold the recovered solvent) to a mix tank to be provided with the material to be coated and that this mix is further pumped to the application apparatus as in claims 37-38, because Kinsley provides for solvent recovery, complete with distillation/decanting which provides a clean solvent that allows for reuse, and it would be obvious to provide for reuse in the coating system itself or an another applicator of the coating system to allow cost savings on solvent.

16. Claimss 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wedler in view of Kinsley as applied to claim 32 and 34-42 above, and further in view of Ellison et al (US 4136636).

Wedler in view of Kinsley teaches all the features of these claims except the blower.

However, Ellison teaches that when moving a coated substrate an oven area it is known to use a fan to establish a slightly negative pressure, causes inward gas flow,

and would prevent vapors from escaping. Column 6, lines 1-45 and column 4, lines 1-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wedler in view of Kinsley to use a blower fan as shown by Ellison, with an expectation of providing a desirable coated fabric, because Wedler in view of Kinsley teaches to coat a fabric followed by squeezing to remove excess solvent and then passage into an oven with a negative pressure (vacuum), and Ellison teaches that providing fans at an oven entrance is a desirable method to provide a negative pressure. As the negative pressure pulls gases in, it would prevent vapors from exiting.

17. The rejection of claim 25 under 35 U.S.C. 103(a) as being unpatentable over Vitalis as applied to claim 24 above, and further in view of Dawson (US 3617211) is withdrawn due to the cancellation of the claim by the amendment of June 13, 2005.

18. The rejection of claims 26-30 and 32-38 under 35 U.S.C. 103(a) as being unpatentable over Vitalis as applied to claim 24 above, and further in view of Kinsley, Jr. (US 4421794) is withdrawn due to the amendments of June 13, 2005.

19. The rejection of claims 39-42 under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley as applied to claim 26-30 and 32-38 above, and further in view of Dawson (US 3617211) is withdrawn due to the amendments of June 13, 2005.

20. The rejection of claims 31 under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley as applied to claim 26-30 and 32-38 above, and further in view of Ellison et al (US 4136636) is withdrawn due to the amendments of June 13, 2005.

21. The rejection of claims 43-48 under 35 U.S.C. 103(a) as being unpatentable over Vitalis in view of Kinsley and Dawson as applied to claim 39-42 above, and further in view of Ellison et al (US 4136636) is withdrawn due to the amendments of June 13, 2005.

Response to Arguments

22. Applicant's arguments with respect to claims 26-48 have been considered but are moot in view of the new ground(s) of rejection.

As to applicant's new requirements as to the evaporator apparatus, the Examiner has provided Wedler as the new primary reference as discussed in the rejection above.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KATHERINE BAREFORD
PRIMARY EXAMINER